

# DRR-Activities of the National ISDR-Platform and Related Institutions in Austria



Reporter: E. Brückl, Vienna University of Technology

# ISDR National Platform in Austria

## ADMINISTRATION

### Austrian Academy of Sciences

National and International  
Research Programs

Secretary: Dr. G. Köck  
Österreichische Akademie der  
Wissenschaften

Email: [guenter.koeck@oeaw.ac.at](mailto:guenter.koeck@oeaw.ac.at)  
<http://www.oeaw.ac.at>

## STRATEGIC BOARD

### National ISDR – Committee

Members of the Austrian Academy of Sciences  
and representatives of:

- Line Ministries
- Federal Provinces
- Central Institute of Meteorology and  
Geodynamics
- National Geologic Survey

Chair: Prof. H. Mang, President of AAS

## RESEARCH

**Focused on the theme defined by the National ISDR – Committee**

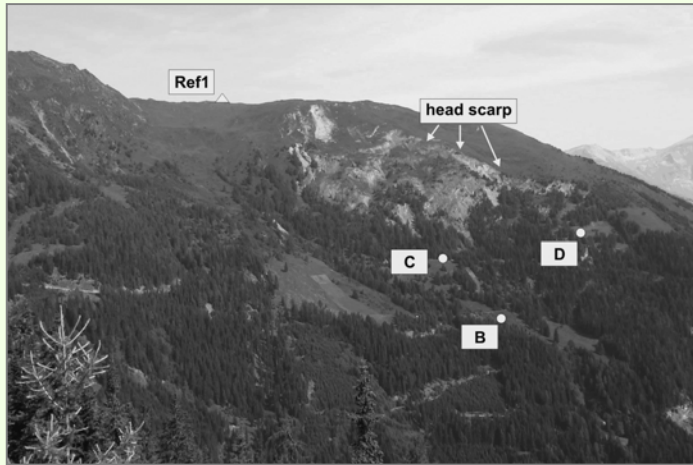
**Ad personam projects, peer review, ~ € 200 000,- per year**

## DISSEMINATION and FEEDBACK

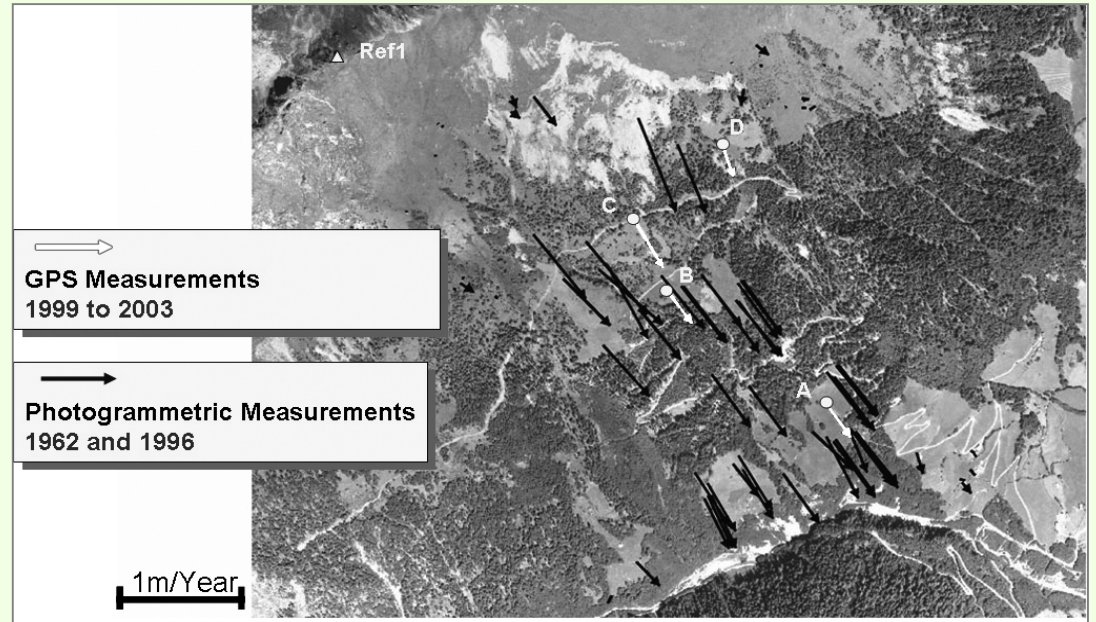
**Seminars and special publications (besides scientific publishing)**

# ISDR-FOCUS LANDSLIDES

## Geodetic Monitoring



GPS (1999 – 2003)

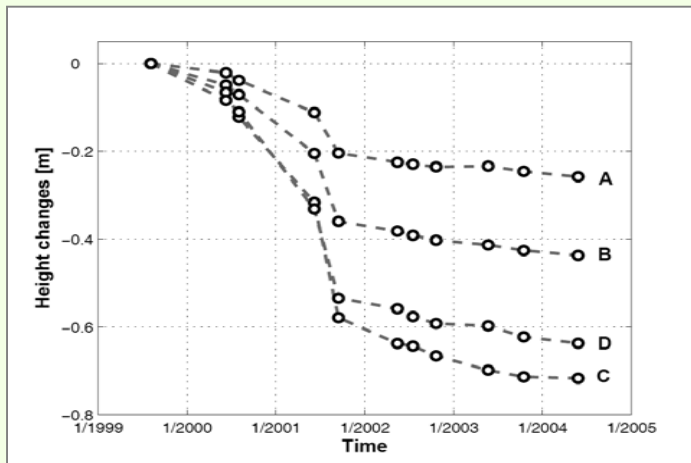


Displacements from photogrammetry (1962 -1996)  
Gradenbach:

Sackung

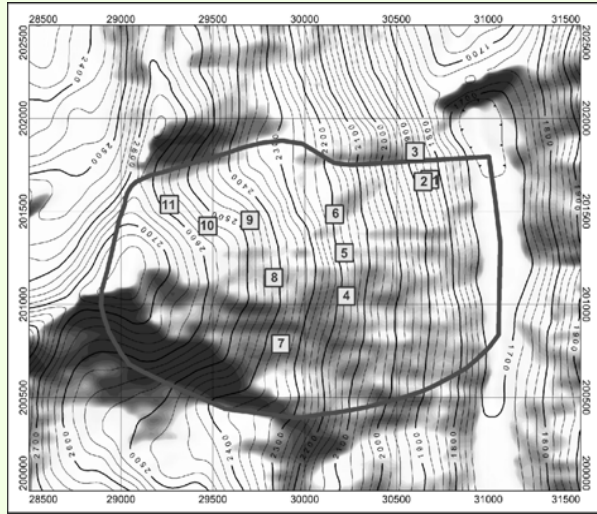
1.6 km<sup>2</sup>

Project: F.K. Brunner, Graz University of Technology

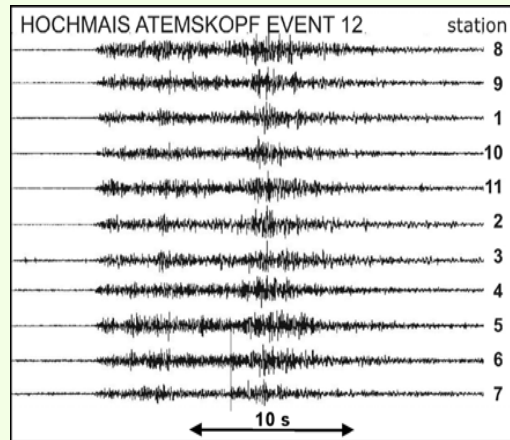
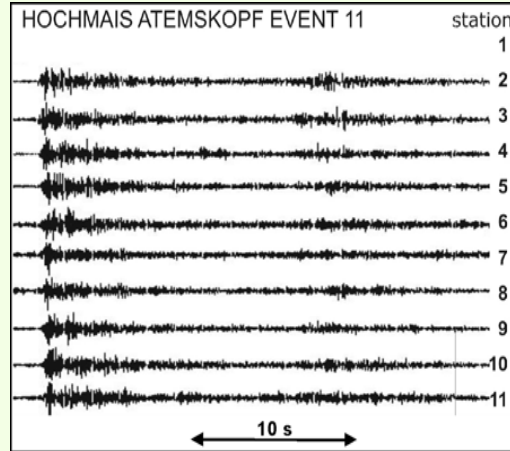


# ISDR-FOCUS LANDSLIDES

## Seismic Monitoring



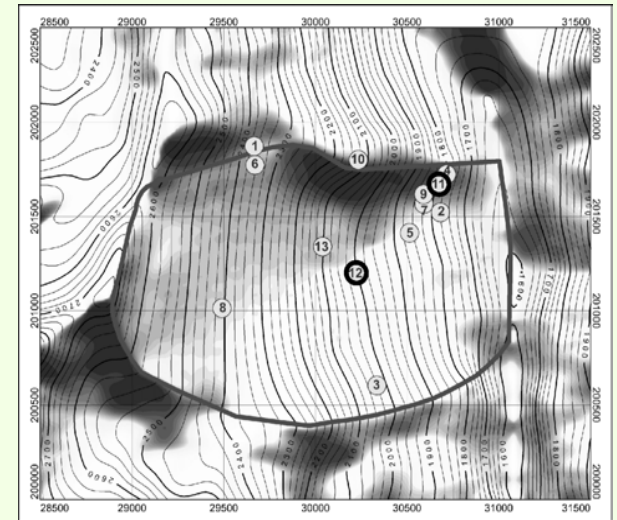
**Seismic Stations**



### Hochmais-Atemskopf:

- Sackung
- 2.8 km<sup>2</sup>
- 0.26 km<sup>3</sup>

### Seismic Events

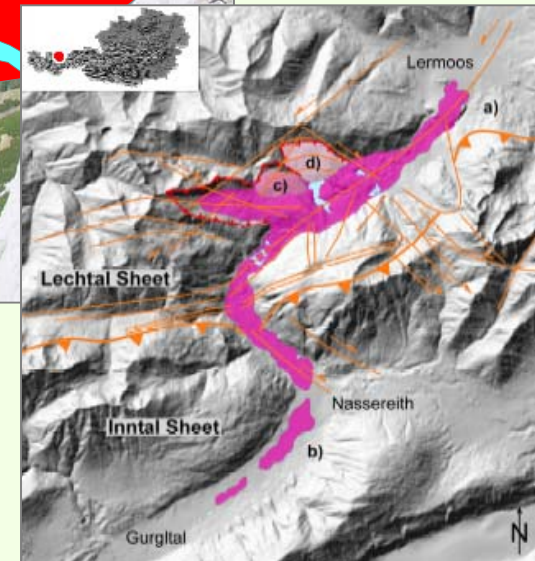
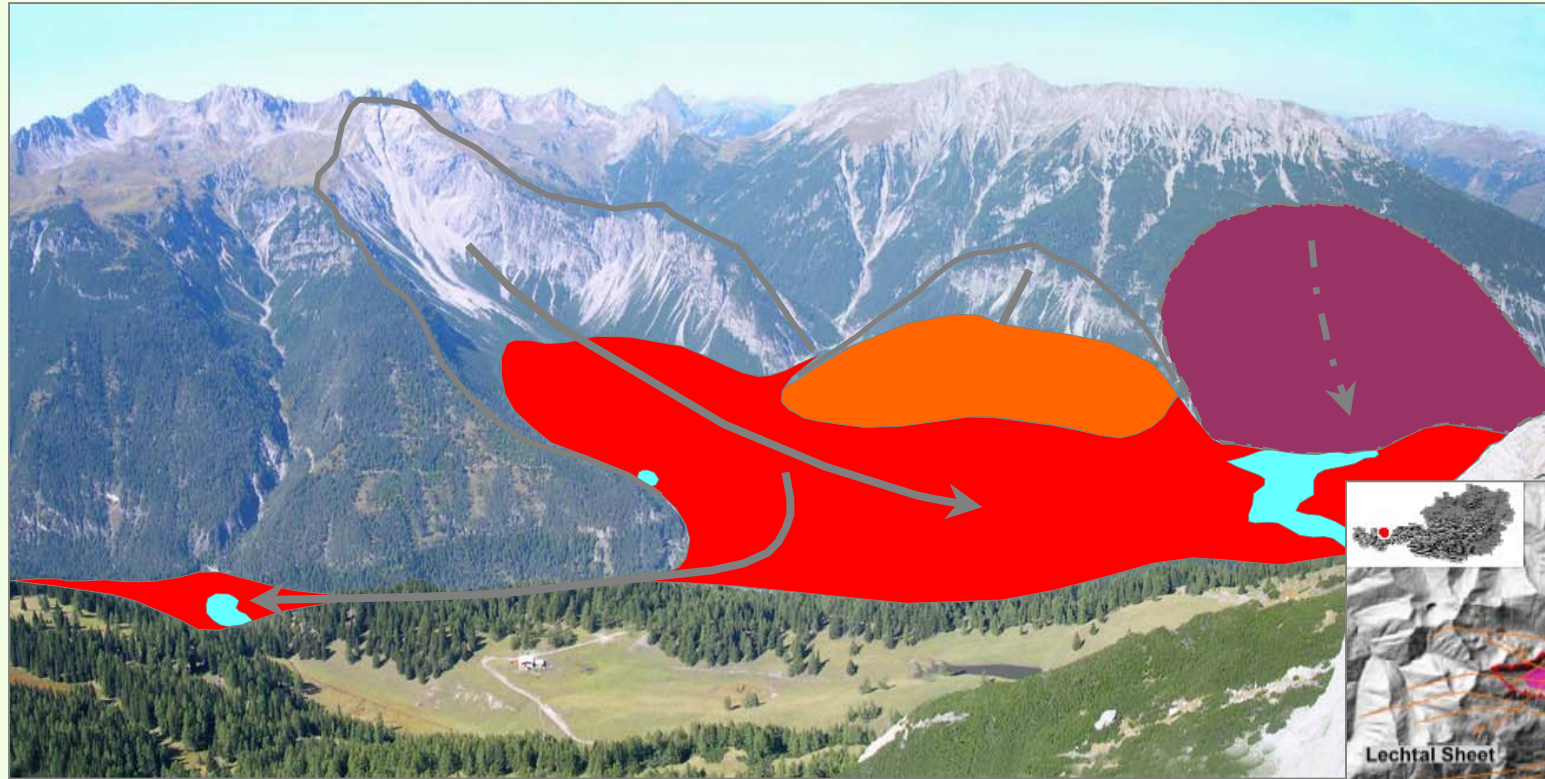


Project: E. Brückl  
Vienna University of Technology

**Scientific Goal: Understand the process and predict the future development.**

# RELATED RESEARCH ACTIVITIES

## alpS: Structural Geology of Large Mass Movements



### FERNPASS

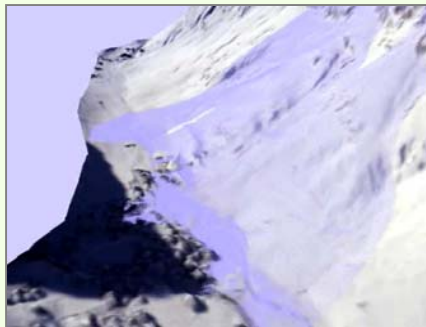
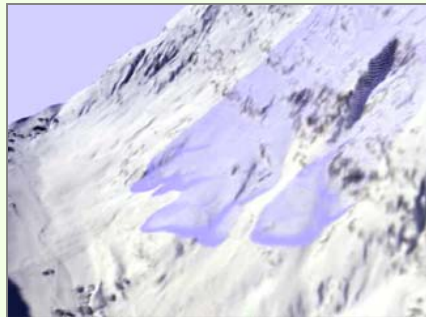
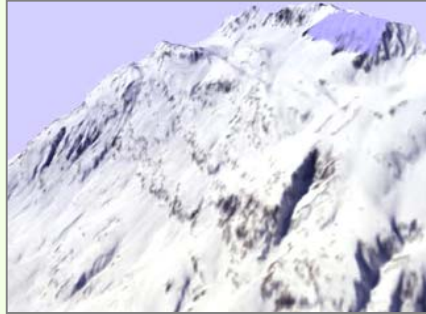
- ~ 3500 a B.P.
- ~16 km extension
- ~ 1 km<sup>3</sup> volume

# RELATED RESEARCH ACTIVITIES

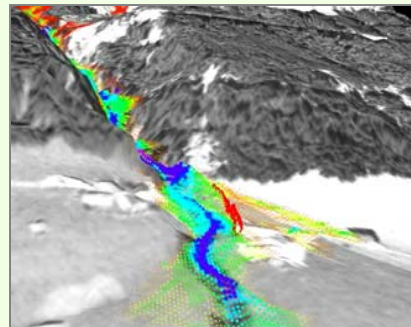
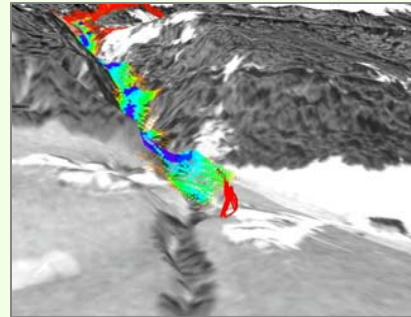
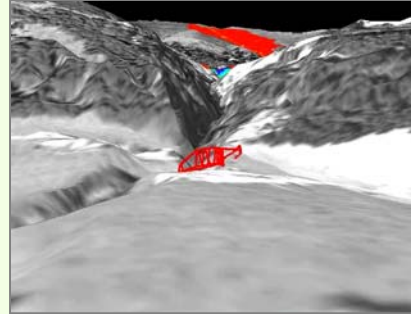
## Institute of Natural Hazards and High Forest Regions

**SAMOS** - **S**now **A**valanche **M**odelling and **S**imulation

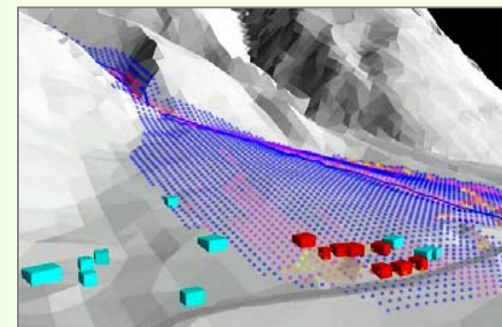
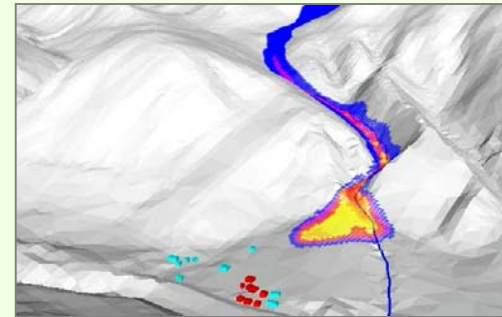
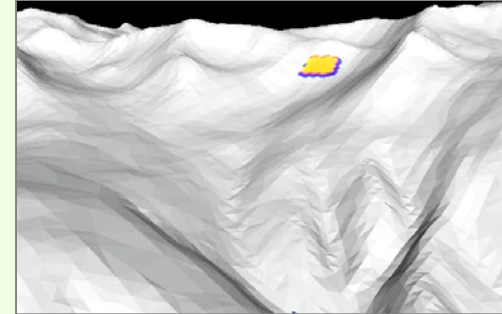
Galtür, 23 02 1999



Hangerbach



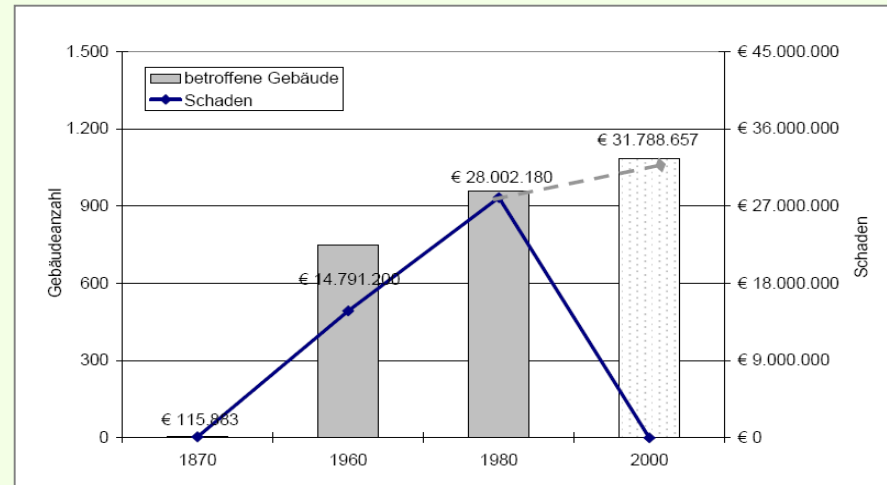
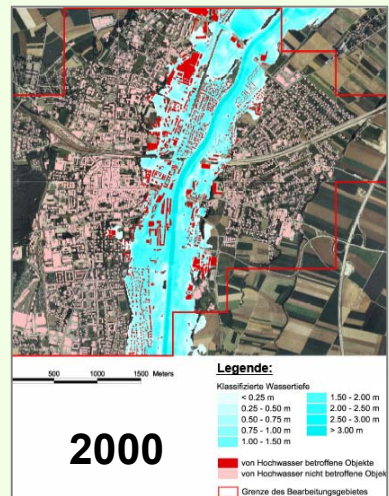
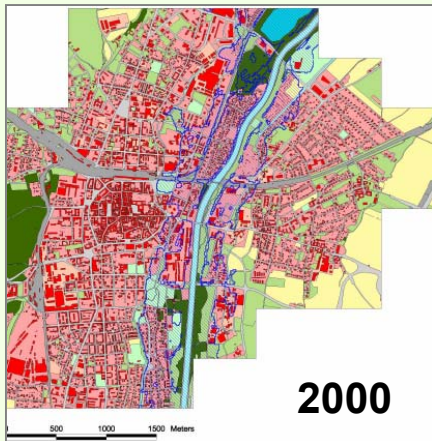
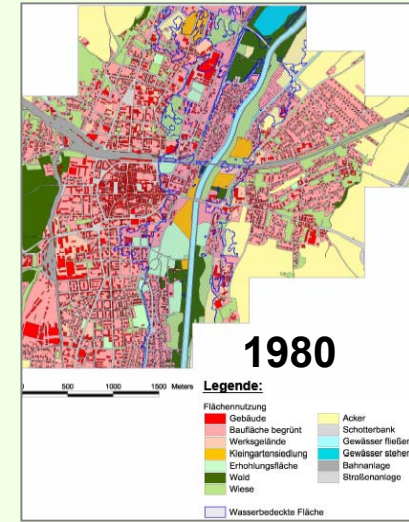
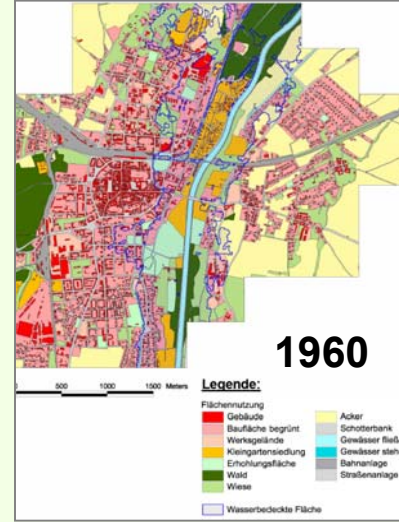
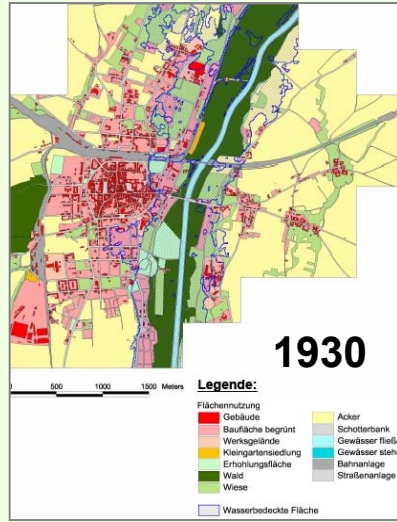
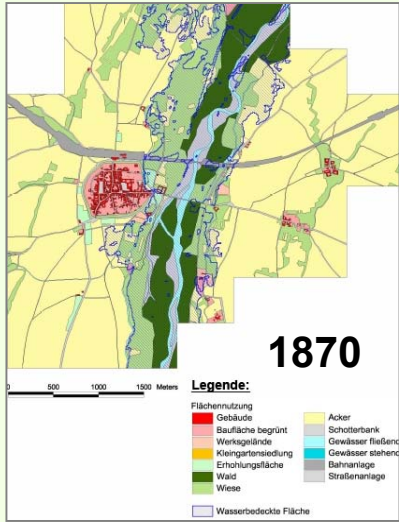
Valzur, 24 02 1999



# RELATED RESEARCH ACTIVITIES

## FLOODRISK Working Group

Expanding development - reduced inundation area - increasing risk



Temporal development of risk and effect of the construction of a dam

# RELATED RESEARCH ACTIVITIES

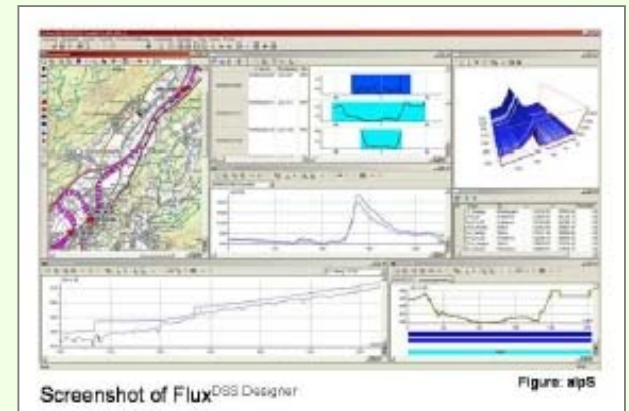
## alpS: Concept on a Flood Forecasting System for the Tyrolean Inn



Photo: Wasserwirtschaft Tirol

1985 Inn flood event, near Langkampfen / Kufstein

**GOALS:** Increase the accuracy of the stream flow forecast and to extend the lead time up to 24 hours  
**INPUT:** Precipitation, hydrologic and hydraulic data and models



Screenshot of Flux<sup>DSS</sup> Designer

Figure: alpS

⇒ Operational Real-Time system



# RELATED RESEARCH ACTIVITIES

## ZAMG - Central Institute of Meteorology and Geodynamics

### Historic Earthquakes

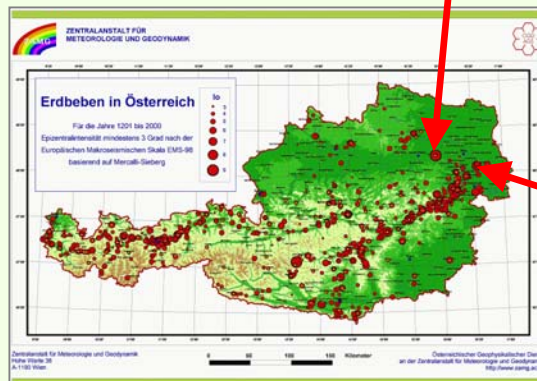
#### Interreg-Projects



Improvement of local prediction methods



Reconsideration of earthquake risk for Vienna



Schwadorf  
08 10 1927

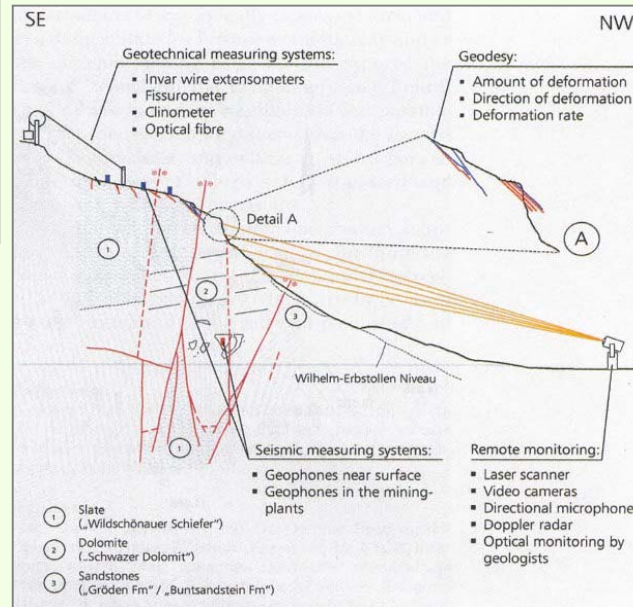
# BEST PRACTICES

## Rockfall Eiblschrofn – Integrated Actions



**1999: Rockfalls threatening the town Schwaz, Tyrol >>> evacuation**

### Operation of monitoring and warning System



### Save construction of protection dams

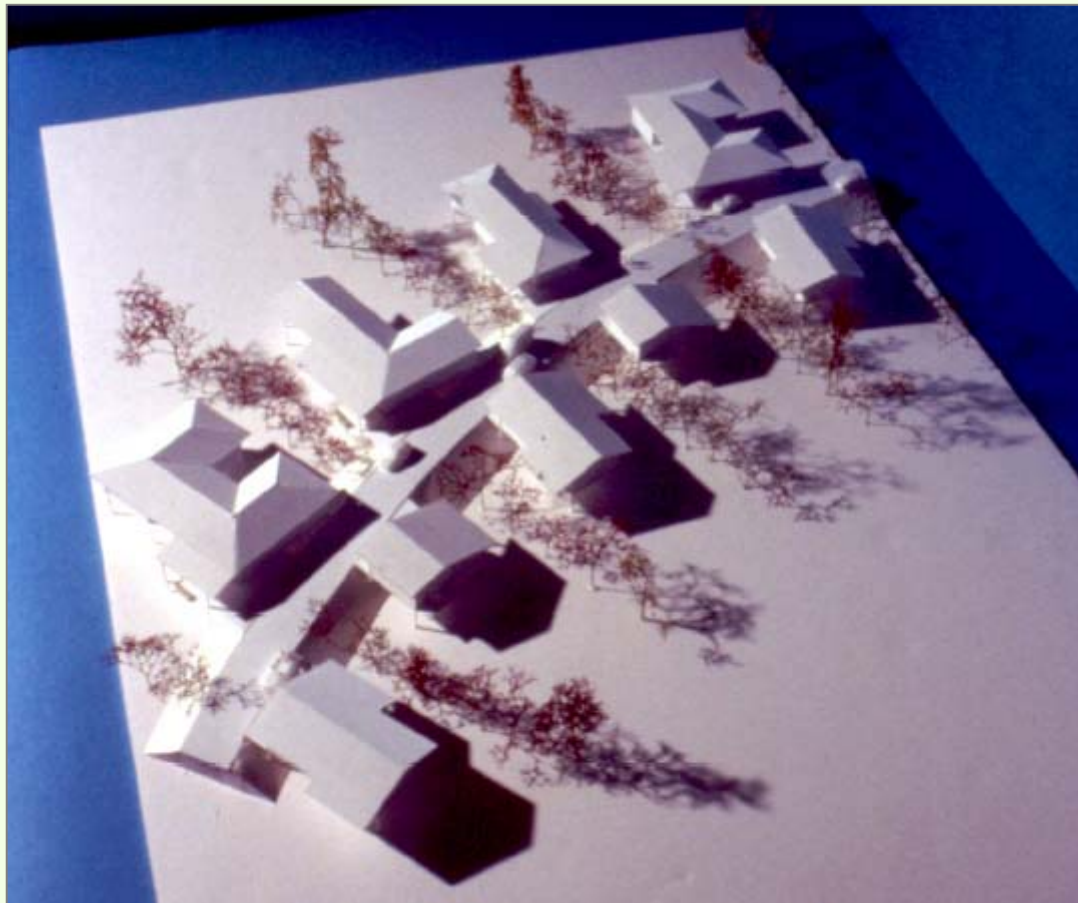


### Integrated actions of:

- Mayor and community
- Agency for avalanche and torrent protection
- Fire brigade, Police
- Red Cross
- Experts
- Companies

# EDUCATION

## Architecture to Mitigate Natural Hazards



Prof. Emmerich Simoncsics  
Vienna University of Technology



Floodproof Housing Estate

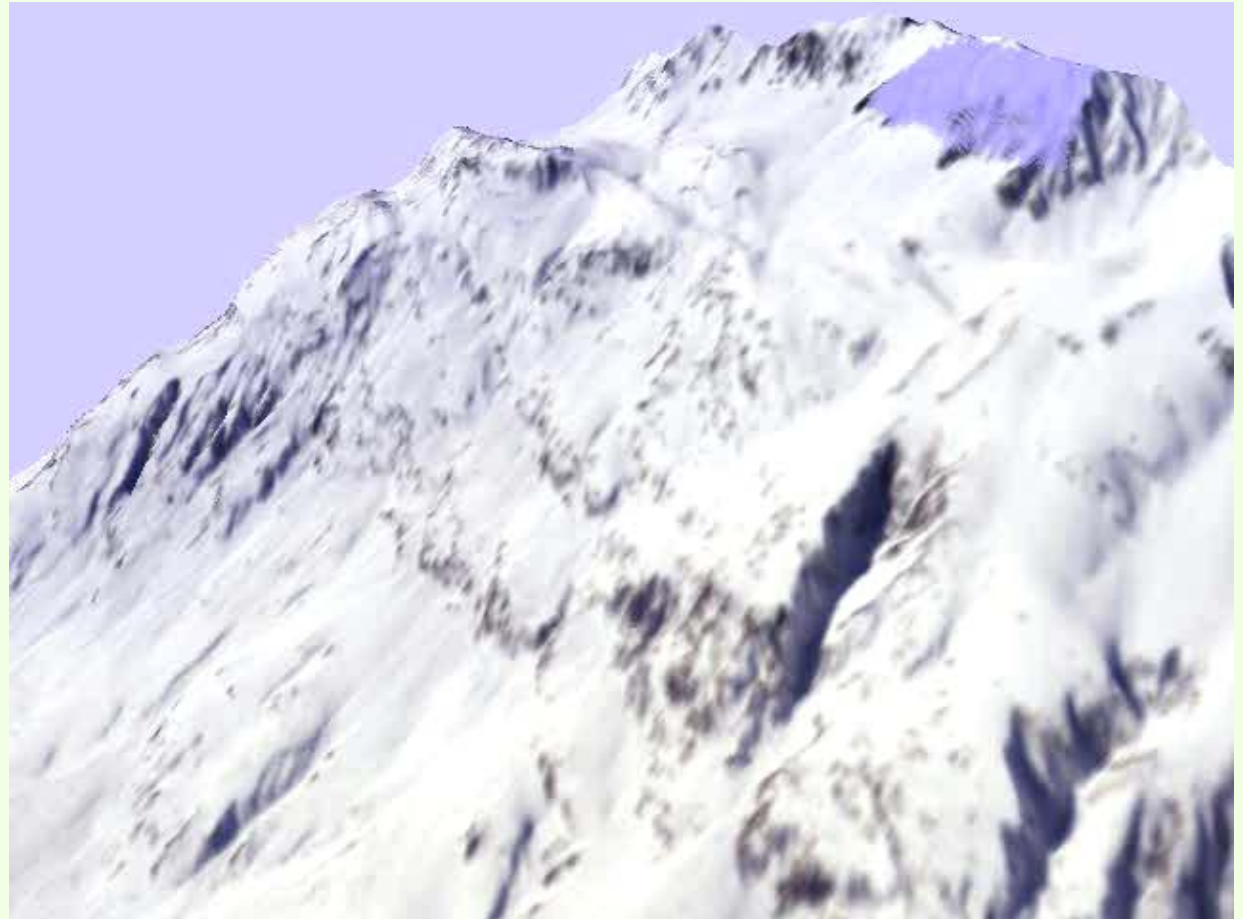


# EDUCATION

## Process Visualization and Simulation as a Teaching Tool

>>>

Galtür, 23 02 1999  
Simulation



<<<

Galtür, 23 02 1999  
Reality

# REFERENCES and CONTACTS

## GENERAL

- **Bundesministerium für auswärtige Angelegenheiten**  
Email: [Katharina.SWIRAK@bmaa.gv.at](mailto:Katharina.SWIRAK@bmaa.gv.at)  
<http://www.aussenministerium.at>
- **Bundesministerium für Inneres**  
Email: [oeffentlichkeitsarbeit@bmi.gv.at](mailto:oeffentlichkeitsarbeit@bmi.gv.at)  
<http://www.bmi.gv.at>
- **Bundesministerium für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft**  
Email: [office@lebensministerium.at](mailto:office@lebensministerium.at)  
<http://www.lebensministerium.at>
- **Bundesministerium für Verkehr, Innovation und Technologie**  
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<http://www.bmvit.gv.at>
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<http://www.oeaw.ac.at>
- **Zentralanstalt für Meteorologie und Geodynamik**  
Email: [dion@zamg.ac.at](mailto:dion@zamg.ac.at)  
<http://www.zamg.ac.at>

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<http://www.gbl.tuwien.ac.at/sim>
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<http://www.umweltbundesamt.at>
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<http://www.boku.ac.at>

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<http://info.tuwien.ac.at/geophysik>
- **Technische Universität Graz**